where A and A' define a respective ester linkage between an hydroxy on the linker and the carboxy on R_1 or R_2 or an ester linkage between a carboxy on the linker and the hydroxy on R_1 as a fatty alcohol, or an amide linkage between an amine on the linker and a carboxy on R_1 or R_2 , or an amide linkage between a carboxy on the linker and an amine on R_1 or R_2 , or one of A and A' is as defined and the other is hydroxy, amino or carboxy in the event that R_1 itself is a free hydroxy, amino or carboxy group.—

Please replace the paragraph beginning on page 6, line 1, with the following rewritten paragraph:

IIb

where

Ar is a saturated or unsaturated, preferably monocyclic carbo- or

heterocycle with 5 or 6 ring atoms; and

A, A', T, Alk, m and n are as defined above.--

Please replace the paragraph beginning on page 9, line 8, with the following rewritten paragraph:

--Favoured linkers of the tartaric acid series above can be generically depicted as Formula IIe:

β3

$$\begin{array}{c|c} R_1 & O & O \\ \hline \\ R_y & O & (CH)_p & (CH)_q & (CH)_r \\ \hline \\ O & & R_2 & IIe \\ \end{array}$$

and isomers where R_1 and R_2 are reversed, where R_1 and R_2 are as shown above, p, q and r are each independently 0 to 5, preferably 0 or 1 and R_y is the free acid, an R_1 ester or a conventional pharmaceutically acceptable carboxy protecting group, such as the methyl, benzyl or especially the ethyl ester.--

Please replace the paragraph beginning on page 9, line 20, with the following rewritten paragraph:

-- Favoured linkers of the malic series have the formula IIf:



$$R_y$$
 O $CH)_p$ $CH)_q$ O $CH)_q$ O $CH)_q$

where Ry, p,q and R₂ are as defined above, preferably those where p and q are zero.--

Please replace page 12 with the following rewritten page 12:



--example on the β -carbon. In this embodiment the fatty acid of R₁ is esterified directly on the 5'-hydroxy (or equivalent) function of the nucleoside, generally with the R₂ group already esterified/amide bonded thereon. Alternatively, the functionalised fatty acid (the carboxy/hydroxy/amino function being appropriately protected) can be first esterified to

the nucleoside and deprotected prior to coupling with R₂. Linkers in accordance with a preferred embodiment of this aspect have the formula IId:

$$\begin{array}{c|c}
R_2 \\
O \\
O \\
H_2C \longrightarrow (CH)_p \longrightarrow (CH)_q
\end{array}$$

IId

where R_2 is the residue of an aliphatic L-amino acid and, p is 0, 1 or 2-20 (optionally including a double bond) and q is 0-5, preferably 0. Representative compounds include:

- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-butyryl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-hexanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-octanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-decanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-dodecanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-myristoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-palmitoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-stearoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-docosanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-valyloxy)-eicosanoyl] guanosine
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-butyryl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-hexanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-octanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-decanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-dodecanoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-myristoyl] guanosine,
- 2',3'-dideoxy-3'-fluoro-5-O-[2-(L-isoleucyloxy)-palmitoyl] guanosine,--

Please replace the paragraph beginning on page 21, line 1, with the following rewritten paragraph:

B6

where R₁, R₂, R_y, p, q, r and o-nuc are as defined above.--

Please replace the paragraph beginning on page 22, line 1, with the following rewritten paragraph:

-- The invention also extends to compounds of the formula Ig



$$R_2$$
 C
 $CH)_p$
 C
 $CH)_q$
 C
 $CH)_q$
 C
 $CH)_q$
 C
 $CH)_q$
 C
 C

where R_2 , p, q and O-nuc are as defined above.--

Please replace the paragraph beginning on page 43, line 1, with the following rewritten paragraph:

IIe*

formula II f*, that is

Formula Id*, that is

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$$R_2 - O - Alk - O - Drug$$

$$Id^*$$

Please replace page 45, with the following rewritten page:

-- Where the Drug comprises a carboxyl function, the linker may comprise a structure of the formulae VIII or VIII':

where A, A', Q, Alk, m, and n are as defined for Formula IIaa & II'aa.

$$-A - (CH2)n Q - Alk - (CH2)m VIII$$

$$-A - (CH2)s$$

VIII'

Preferably, however, when the Drug comprises a carboxy function, the di- or trifunctional linker group L is a structure of Formulae IIdd or II'dd (that is a compound of Formulae IIaa or II'aa, wherein T is O and V is a structure of the formula IIbb):

BIO

In structure IIdd, R_4 ' is preferably hydrogen and R_4 is ethyl, phenyl, and especially methyl or hydrogen or R_4 and $R_{4'}$ together define isopropyl--

Please replace page 46, with the following rewritten page:

-- Where the Drug comprises a phosphoryl, phosphinyl or phosphonyl function, the dior trifunctional linker group L may comprise a structure of the formula Ilaa or Il'aa, especially those of the formula Ilee or Il'ee:

where T is a bond, -NH- or -O- and Q and A are as defined above including the cyclic Q structures such as cycloalkyl, phenyl and heterocycles such as furyl, pyridyl etc. In structures liee and li'ee, R_4 ' is preferably hydrogen and R_4 is methyl, ethyl, phenyl and especially hydrogen or R_4 and R_4 ' define isopropyl.

Preferably, however, where the Drug comprises a phosphonyl, phosphinyl or phosphoryl function, the difunctional linker comprises a structure of the formula II"b:

Va

$$--A -- (CH2)q | (CH2)qr- T | O R4r$$

$$R41' | CH2)qr- T | II''b$$

where T is a bond, -O- or -NH-, R_{4l} R_{4r} and R_{4l} ' and R_{4r} ' are independently H or C_1 - C_3 alkyl and A is as defined above (or wherein A is a further diffunctional linker to--

Please replace the paragraph beginning on page 47, line 1, with the following rewritten paragraph:

-- which one or more R_2 depends as described above). Examples of structures belonging to the latter possibility for A include those of Formula Va and Vb:

B12

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$$R_{2} = O = (CH_{2})_{1-5} = O = (CH_{2})_{ql} = (CH_{2})_{qr} = T = O = R_{3r}$$

Vb

where T, q, R_2 , R_{4l} R_{4r} and R_{4r} are as defined above. Although formulae Va and Vb depict the dicarboxylate moiety as unbranched, it will be apparent that a wide variety of dicarboxylates will be suitable here, including branched and/or unsaturated and/or substituted dicarboxylic acid derivatives or various lengths, as described in more detail above.--

Please replace the paragraph beginning on page 48, line 23, with the following rewritten paragraph:

-- A further aspect of the invention comprises novel intermediates useful in applying structures of the formulae II"b to a drug and having the formula N-1:

B13

$$A-(CH2)qI - (CH2)qr - T - O - R4r hab$$

$$R41' - R41'$$

$$R41' - R41' hab$$

where A, q, R₄, R₄' and T are as defined for formula II"b.--

Please replace the paragraph beginning on page 49, line 1, with the following rewritten paragraph:

-- A particularly preferred group of compounds substantially within formula N-1 are those of the formula N-2



or

N-2

R₂ is the acyl residue of an aliphatic amino acid,

 R_{3L} and R_{3L} ' are independently H, C_{1-3} alkyl, C_{3-6} cycloalkyl, C_{1-3} alkyl- C_1C_6 cycloalkyl phenyl or benzyl,

 R_{3R} and R_{3R} ' are independently H or C_{1-3} alkyl ql is 0-3, qr is 0-3,

T is a bond, -NR₃- or -O-

R₃ is H or C₁₋₃alkyl;

"ring" is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle; and halo is bromo, chloro or iodo. --

Please replace the paragraph beginning on page 61, line 1, with the following rewritten paragraph:

-- Taking the phosphonate antivirals adefovir and cidovir as examples, prodrugs of the invention can be applied as shown in Formula PF2:

$$R_{2}-O-(CH_{2})_{q\overline{l}} \xrightarrow{R4_{1}'} (CH_{2})_{qr} \xrightarrow{T} \xrightarrow{O} O \xrightarrow{R4_{r}} O \xrightarrow{P} O \xrightarrow{Base}$$

or

$$R_2$$
—O—(CH₂)_{ql}-ring- (CH₂)_{qr}— T—O—O—R_{4r}O—P—O—Base R_{4r}'—R_{f3}—R_{f4}

where

R₂ is the acyl residue of an aliphatic amino acid,

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 R_{4L} and R_{4L} ' are independently H, C_{1-3} alkyl, C_{3-6} cycloalkyl, C_{1-3} alkyl- C_1C_6 cycloalkyl phenyl or benzyl,

 R_{4R} and R_{4R} ' are independently H, C_{1-3} alkyl or phenyl ql is 0-3, qr is 0-3,

T is a bond, -NR₄- or -O-

R₄ is H or C₁₋₃alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle; base is a natural or unnatural nucleotide base, especially guanine, adenine or cytosine, Rf3 is H or a further structure of the formula II"b and Rf4 is H or CH₂OH.--

Please replace the paragraph beginning on page 65, line 1, with the following rewritten

or

where

R₂ is the acyl residue of an aliphatic amino acid,

 R_{4L} and R_{4L} ' are independently H, C_{1-3} alkyl, C_{3-6} cycloalkyl, C_{1-3} alkyl- $C_{1}C_{6}$ cycloalkyl phenyl or benzyl,

 R_{4R} and $R_{4R}{^{\prime}}$ are independently H, $C_{1\text{--}3}$ alkyl or phenyl

ql is 0-3, qr is 0-3,

T is a bond, -NR₄- or -O-

R₄ is H or C₁₋₃alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle; and Rf1 is H or a further ester of formula II"b and Rf2 is H or a conventional pharmaceutically acceptable ester.--

Please replace the paragraph beginning on page 68, line 1, with the following rewritten paragraph:

or

$$R_2-O-(CH_2)_{ql}\text{-ring-}(CH_2)_{qr}-T \xrightarrow{O} O \xrightarrow{R4_r} O \xrightarrow{O} O \xrightarrow{R4_r} O \xrightarrow{P} H \xrightarrow{R4_{r'}} Rfl \xrightarrow{Rfl} O \xrightarrow{Rfl} Rfl$$

where

RF1 is H or a further structure of formula II"b

Rf2 is H or a conventional pharmaceutically acceptable ester,

Rf3 is a polyunsaturated, branched C₆₋₂₂ alkyl,

 R_2 is the acyl residue of an aliphatic amino acid,

 R_{4L} and R_{4L} ' are independently H, C_{1-3} alkyl, C_{3-6} cycloalkyl, C_{1-3} alkyl- C_1C_6 cycloalkyl phenyl or benzyl,

 R_{4R} and R_{4R} ' are independently H, $\,C_{1-3}$ alkyl or phenyl ql is 0-3, qr is 0-3,

T is a bond, -NR₄- or -O-

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R₄ is H or C₁₋₃alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle.--

Please replace the paragraph beginning on page 69, line 4, with the following rewritten paragraph:

-- Other structurally similar phosponates include α -phosphonosulphonates such as squalene synthase inhibitors of the formula PF5:

$$R_{2}-O-(CH_{2})_{q\overline{l}} \xrightarrow{R4L'} (CH_{2})_{q\overline{r}} - T \xrightarrow{O} O \xrightarrow{R4r} O \xrightarrow{P} Rf_{2}$$

$$R_{4r'} \xrightarrow{O} Rf_{2}$$

$$R_{4r'} \xrightarrow{O} Rf_{3}$$

or
$$R_{2}-O-(CH_{2})_{ql}\text{-ring-}(CH_{2})_{qr}-T \longrightarrow O \longrightarrow R_{4r} O \longrightarrow R_{6r} O$$

where

RF1 is H or a further structure of formula II"b

Rf2 is H or a conventional pharmaceutically acceptable ester a further structure of formula II"b

Rf3 is a polyunsaturated, branched C₆₋₂₂ alkyl,

R₂ is the acyl residue of an aliphatic amino acid,

 R_{4L} and R_{4L} ' are independently H, C_{1-3} alkyl, C_{3-6} cycloalkyl, C_{1-3} alkyl- C_1C_6 cycloalkyl phenyl or benzyl,

 R_{4R} and $R_{4R}{}^{\prime}$ are independently H, $C_{1\text{--}3}$ alkyl or phenyl ql is 0-3, qr is 0-3,

T is a bond, -NR₄- or -O-

B18

R₄ is H or C₁₋₃alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle.--

Please replace the paragraph beginning on page 73, line 1, with the following rewritten paragraph:

B19

$$R_2$$
— O — $(CH_2)_{q\overline{l}}$ — $(CH_2)_{\overline{qr}}$ T — O — R_4R
 R_4R'

or

$$R_2$$
—O — $(CH_2)_{ql}$ -Ring- $(CH_2)_{\overline{qr}}$ T — O R_{4R}

where

 R_2 is the acyl residue of an aliphatic amino acid,

 R_{4L} and R_{4L} ' are independently H, C_{1-3} alkyl, C_{3-6} cycloalkyl, C_{1-3} alkyl- C_1C_6 cycloalkyl phenyl or benzyl,

 R_{4R} and R_{4R} ' are independently H or C_{1-3} alkyl ql is 0-3, qr is 0-3,

T is a bond, -NR₄- or -O-

R₄ is H or C₁₋₃alkyl;

ring is an optionally substituted aromatic or non-aromatic, hetero-or carbocycle;

and the remainder of Ra1-4 are hydrogen or conventional pharmaceutically acceptable esters.--

Please replace the paragraph beginning on page 85, line 16, with the following rewritten paragraph:

--A still further preferred group of prodrugs of the invention are those based on fosinoprilate having the formula PF3:

$$\begin{array}{c|c} & & & & & & & \\ & & & & & & \\ R_{4l} & & & & & \\ R_{2} & & & & \\ R_{2} & & & & \\ R_{4l'} & & & & \\ \end{array}$$

 Please replace the paragraph beginning on page 88, line 13, with the following rewritten paragraph:

-- A further phosphonate compound amenable to the prodrugs of the invention are the neutral endopeptidase inhibitors such as CGS-24592 (Novartis), preferably those of the formula PF6:

or
$$R_2-O-(CH_2)_{ql}\text{-ring-}(CH_2)_{qr}-T \xrightarrow{O} O \xrightarrow{R4_r} O \xrightarrow{P} N \xrightarrow{NH} O$$

where RF1 is H or a further structure of formula II"b --

Please replace the paragraph beginning on page 100, line 21, with the following rewritten paragraph:

-- Disclosed embodiments of Formula II for the A'/A" groups of the compounds of formula I include those of the formula IIa:

lla

where n is 1 or 2 and R' is alkyloxy, preferably methyloxy, or those where n is 0 and R' is methyl.--

B22 m

Please replace the paragraph beginning on page 130, line 18, with the following rewritten paragraph:

-- One variant of a branched Alk^b in Formula P5 can be substituted with hydroxy which in turn is esterified with a further R², thus defining a linker of the formula IIa, as depicted in Formula P6:

P6

where Rp8, Rp9, Rp10, Alk, R₄, R₄', m, n and R₂ are as defined above. Preferably each occurrence of Rx and Rx' is H. Particularly favoured values for Alk, m and n include: methylene:1:1 and absent: 1:0 respectively.--

Please replace the paragraph beginning on page 131, line 1, with the following rewritten paragraph:

-- A further favoured group of compounds has the Formula P7:

B24

P7

where Rp8, Rp9, Rp10, Alk, R₄, R₄', m, n and R₂ are as defined above or wherein the - $()_m$ -O-R₂ arm is absent. Preferably each occurrence of Rx and Rx' is H. Particularly favoured values for Alk, m and n include:absent:1:1, thus defining a glycerol derivative. Where the - $()_m$ -O-R₂ arm is absent to define a structure of the formula P7':

 $\begin{array}{c|c}
Rp8 & O & Rp10 \\
\hline
O & R4 & Rp9 & O & R4' & O & O & Alk & (CH2)_n - O - R2
\end{array}$

P7'

Convenient values for Alk and n include absent:1 with R₄, R₄ and R₄' as H.--

Please replace the paragraph beginning on page 134, line 2, with the following rewritten paragraph:

-- As with Formula P5/P6 and P7/P7', Alk^b in formula P8 can comprise an additional -O-R₂ substitution to define a compound of the formula P8'



B25

P8'

where each of the variables is as defined above .--

Please replace the paragraph beginning on page 138, line 18, with the following rewritten paragraph:

-- A still further aspect of the invention provides novel R₂ bearing linkers suitable for derivatisation to free functions on a Drug. Preferred linkers in accordance with this aspect of the invention include compounds of the Formulae IVa:

B26

$$R_2$$
— A — $(CH_2)_n$ — Alk — T
 R_4
 R_2 — A — $(CH_2)_m$

IVa

where R₂, A, A', n, m, Q, Alk, k and T are as defined above and R₄ is hydroxy or an activating group such as an acid derivatives including the acid halide, such as the chloride, anhydrides derived from alkoxycarbonyl halides such as isobutyloxycarbonylchloride and the like, N-hydroxysuccinamide derived esters, N-hydroxyphthalimide derived esters, N-hydroxy-5-norbornene- 2,3-dicarboxamide derived esters, 2,4,5-trichlorophenol derived

esters and the like. Compounds of Formula IVa will be particularly useful for Drugs bearing hydroxy or amine functions.--

Please replace the two consecutive paragraphs beginning on page 139, line 1, with the following rewritten paragraphs:

--Further preferred linkers in accordance with this aspect of the invention include compounds of the formulae IVe:

where R_2 , A, A', n, m, Q, Alk and T are as defined above, and R_4 an activating group such as a halide, including bromo, chloro and iodo. Compounds of Formula IVe will be especially useful for Drugs bearing carboxy functions (especially those where T is O, R_3 is Me and R_3 ' is H) or phosphonyl functions (especially those where T is a bond, R_3 is isopropyl and R_3 ' is H).

Alternative preferred di- or trifunctional linker compounds of this aspect of the invention include compounds of the Formulae IIIa:

$$R_2$$
— A — $(CH_2)_n$ Q — Alk — R_4 $(R_2$ — A — $(CH_2)_m)_k$

IIIa

where R₂, A, A', n, m, Q and Alk are as defined above and R₄ is hydroxy or an activating moiety such as halo, including chloro, iodo and bromo.--